

FACT SHEET ON NACA PROGRAM

Around mid-1954, Lockheed Aircraft Corporation undertook construction of a new airplane which would be capable of routine, high-altitude flight. Built with Lockheed's own funds, the airplane is a conventional, straight-wing design, and is powered by a single Pratt & Whitney J-57 turbojet engine. It has a light wing loading to enable flight at altitudes between 50,000 and 55,000 feet. In addition, speed was intentionally sacrificed to a subsonic maximum to eliminate as many design and construction problems as possible. Lockheed's need for such an airplane was to provide the means to build up essential high-altitude operating experience with power plant and electrical systems, etc. Especially with respect to fuel controls and metering problems, such actual flight time is necessary. Further details on the airplane are classified because it is still regarded as an experimental type and because of the classified equipment it carries.

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Early in 1956 the NACA, relying in part on its knowledge of the U-2 aircraft, began planning for an atmospheric research program of broad interest to U.S. aeronautical science, both civilian and military. In addition to being the original promoter of this program, NACA furnished assistance in the development of equipment, especially of

instrumentation required for the research program. It will also coordinate the exploitation and dissemination of the scientific results obtained. The primary objective of NACA's program is the gathering of upper atmosphere data, e.g., turbulence associated with the jet stream and convective clouds, temperature and wind structures at jet levels, cosmic ray effects, etc., at altitudes up to 10 miles. Widespread but simultaneous observations from various points in the Northern Hemisphere will enable an integrated study of high altitude phenomena which is expected to be of particular value both to governmental and private research organizations. NACA considered the newly procured U-2 as one of the most suitable vehicles for carrying out its research program.

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Availability of the U-2, one type of several aircraft that will be used in NACA's research activities, helps to obtain the needed data in an economical and expeditious manner.

These activities will be conducted both in the United States and abroad. Since NACA does not have independent facilities for conducting test programs abroad, the overseas program will be organized as a "joint task force" based at USAF installations and supported by appropriate USAF major commands. The Air Weather Service will act as USAF "executive agent" in support of NACA activities, and will activate

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to give operational direction and render direct support to NACA. has recently

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been activated to support the initial NACA research team assembled
at [REDACTED] test program
referred to above is in progress.

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